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Cambridge Analytica: The Scandal on Data Privacy

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Cambridge Analytica: The Scandal on Data Privacy

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Introduction to Cambridge Analytica: A Brief Background

Cambridge Analytica is a political consultancy company that was founded in 2013 and “combines the predictive data analytics, behavioral sciences, and innovative ad tech into one approach” (Rathi). Cambridge Analytica’s goal was to “persuade users to vote a certain way by showing different advertisements on the same issue to different people” (Rathi). Cambridge Analytica has a parent company, SCL, and is most well-known for its work on the Presidential campaigns of Ted Cruz and Donald Trump, as well as its involvement with the Leave EU and Brexit movement. Since the scandal has been brought to media attention by former lead analyst of the company, Christopher Wylie, in March of 2018, Cambridge Analytica has filed for bankruptcy.

This paper aims to discuss various perspectives of the Cambridge Analytica case and data privacy debates. First, there were many key figures with many different roles who helped illustrate the scandal the way it is discussed today. Next, I will describe how the data was collected, including some of the controversies regarding these methods. Furthermore, the next section refers to the impact, or lack thereof, of these tactics on the 2016 US Presidential Election. Then, I will further evaluate one of the key sides to the story, Facebook. Additionally, I will illustrate my opinion on where I see the future of big data and propaganda techniques going. Finally, I will evaluate the faults and ethics of what I deem as the three sides to this case: Cambridge Analytica, Facebook, and the consumers.

Key People

There were many influential people in the Cambridge Analytica scandal. Some of the most prominent are Christopher Wylie, Brittany Kaiser, Alexander Nix, Aleksander Kogan, Steve Bannon, Robert Mercer, and Mark Zuckerberg. Christopher Wylie was the initial whistleblower to erupt the scandal and break it to the media. He was a former lead analyst at Cambridge Analytica. Additionally, he was the one to give “the company new capabilities” (Knight). According to Knight, when the company was just Nix and Kogan, Cambridge Analytica still had the same goals but was not very close to achieving the microtargeting and behavioral sciences. They had the data, but were unable to effectively use it. That is one of the biggest aspects of being a good data analyst: knowing how to apply and use the data to reach your goals. Christopher Wylie was able to accomplish this for the firm.

Another key player was Brittany Kaiser. She recently starred in the Netflix documentary, *The Great Hack*. Brittany Kaiser was also a whistleblower after everything was leaked, worked as the director of Business Development at Cambridge Analytica. She claims that she changed her character to fit the role of the clients they were serving (Republican politicians) in order to gain the most insight as to how to best market to constituents and gain their “trust and respect” (Amer, Noujaim “The Great Hack”). Some say that Kaiser has unreliable testimonies in the aftermath, saying that “her whistleblowing was done more to save herself than to expose the company she worked for” (Wakefield). Kaiser is now an advocate of the hashtag “own your data” and while still is involved with data analysis on the political front, she claims it to be more ethical (Stankiewicz). She also wants political advertising on Facebook to be banned (Wakefield).

The next few key people have not been as open to the press as Wylie and Kaiser; these people are more of the ones who are blamed for the scandal and their statements have been given to various committees and sections of the government. Alexander Nix was the CEO of Cambridge Analytica. Despite all of the allegations of false testimony and bad publicity surrounding him, it is said that he still works in the political consultancy industry (Wakefield). Aleksander Kogan was a research scientist from the University of Cambridge who collected the data from an app he developed. I will discuss these methods further later, however, he is still close with Alexander Nix. Nix and Kogan have both been charged with falsely claiming that they did not collect any personally identifiable information from Facebook users (FTC). Steve Bannon was a conservative political strategist who worked on the Donald Trump Campaign leading up to 2016 election victory. He is now the White House Chief Strategist (INSTAR). Additionally Bannon was the Vice President of Cambridge Analytica and worked closely with Christopher Wylie and Robert Mercer (Smith). Bannon has also been Mercer's political advisor since 2012 (INSTAR). Robert Mercer helped fund Cambridge Analytica by donating \$5 Million to their company (INSTAR). Mercer is also not shy about his Republican beliefs, and contributes substantial sums of money to the party and their candidates. Mark Zuckerberg is the CEO of Facebook. Since Facebook is the social platform that was used to collect the data and target the political advertising, it too has faced a lot of scrutiny. I will discuss the extent of Facebook's involvement in future sections, however it is important to note that Mark Zuckerberg and Facebook have also been fined by the FTC for deceiving consumers and failing to protect the data privacy rights of its users (FTC).

Paul-Olivier Dehay and Carole Cadwalladr are the final people that I want to highlight. While they do not have direct ties to Cambridge Analytica, the Republican party, or Facebook, these two people were the reporters that have helped “lift the lid” on the scandal and are prized with their investigative journalism coverage on this topic. Paul-Olivier Dehay is a Swiss mathematician with a niche for investigating how data is being collected. He was first interested in the company Coursera, however, after being restricted from access with them, his interest was sparked by Cambridge Analytica’s work on the Ted Cruz campaign (The Local). His biggest take away is the question: “how do you make the invisible [rights] visible?” (Amer, Noujaim “The Great Hack”). Similarly, Carole Caldwelladr was initially investigating SCL and Cambridge Analytica on their involvement with the Brexit Campaign and Leave EU movement. After the US Election she continued on the investigation in the company. She found her connection to the two campaigns (Brexit and US Presidential Election) in Brittany Kaiser (Amer, Noujaim “The Great Hack”).

Methods Used to Collect Data

The first step that occurred was Aleksander Kogan’s survey. He designed a 120 question survey that “sought to probe personality” (Detrow). Then, the company, primarily Nix and Wiley (Rosenberg, Confessore, Caldwelladr), scored the results based on the “big five” personality traits: openness, conscientiousness, extroversion, agreeableness, and neuroticism (Detrow). Not only did the company have access to the people who took the quiz’s results, but he developed the app in such a way that people would sign in using their Facebook accounts (Detrow). This gave them access to the Facebook user ID, which included personal information such as gender,

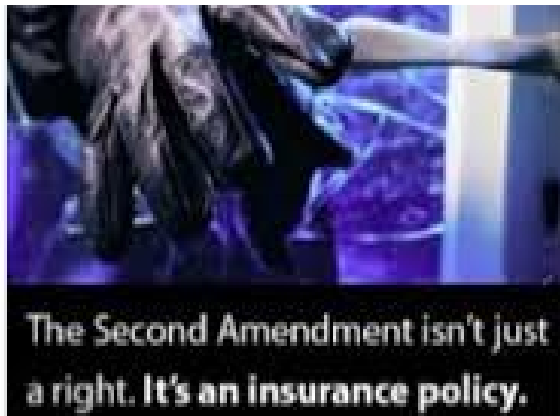
birthdate, location, their likes and interests, as well as their list of friends (FTC). Now, this is where it gets a little fishy. Facebook allowed Kogan to obtain this information for academic research purposes. He was not given the rights to pass it along to a third party, which he did when he partnered with Cambridge Analytica (Detrow).

Many people argue that Facebook could have made their terms and conditions more clear to its users and the people who purchase space (either through advertising or third party apps). On the other hand, some people argue that it is up to the consumers to read the terms and conditions to know what they are getting themselves into and what data might be collected. As many people have attested to: “The root of this scandal was consent” (Smith). I will touch back on this debate later, but Facebook claims that all of user’s data privacy rights are listed in the terms and conditions which many people, myself included, do not take the time to read and instead just hit “agree” (FTC). Therefore, the privacy rights are technically legally disclosed. Additionally the use of your friends list and collection of their data is believed to be disclosed within Facebook’s agreement with third party apps (Leetaru). Within the third party’s app, there are also terms and conditions that the company, in this case Facebook, must adhere to. Facebook allegedly “failed to read all of GSR’s app’s terms and conditions during their app review process” (Smith). Finally, even with GSR’s own conditions, Kogan has said he did not read Facebook’s App Developer policy which would prohibit him from sharing the data with Cambridge Analytica (Smith). All in all, the terms and conditions are where most of the data privacy rights are explained and people from consumers to top companies fail to read them thoroughly, which leads to controversial debates such as this one to surface.

Since Kogan had created the database of nearly 270 million American adult consumers, he was able to make generalized conclusions about certain voter behaviors through the use of computer algorithms and machine learning (Amer, Noujaim “The Great Hack”). In his article, *Weapons of Micro Destruction: How Our ‘Likes’ Hijacked Democracy*, Dave Smith recreates and explains the process that Cambridge Analytica is said to have used to develop their model. He claims that the predictions made by machines can be more accurate than humans. According to his research, Cambridge Analytica used LASSO regression and SVD + Linear/Logistic regression to reach their personality predicting algorithms. These regressions are very effective methods and tools to use with high-dimensional data, such as the millions of possible facebook likes and interest (Smith). Smith explains that “They give you a way to eliminate data redundancy, focus on the information with the most predictive influence, and improve computational efficiency.” as well as LASSO regression having a better interpretability capability (Smith). The goal of the regressions were to find the Facebook pages with the highest predictive influences on someone’s level of a specific “big five” personality trait (Smith). After many iterations of people’s likes and interests, the machine (computer) “learns” or predicts the personality characteristics more and more accurately.

Since Cambridge Analytica “combines predictive data analytics, behavioral sciences, and innovative ad technology into one” method (Rathi), they are able to accomplish individualized, micro-targeted political ads. Microtargeting is defined as “when the target audience is very much restricted to only a few individuals, that have a very specific element in common” (Barbu). From their personality scorecard based on the OCEAN personality traits, Cambridge Analytica definitely employed this technique. There is a lot of debate over its efficiency and effectiveness

of the regression models from machine learning. As I previously mentioned, Cambridge Analytica worked on the Ted Cruz and Donald Trump campaigns. Part of their process in helping their candidates is by showing different ads on the same issue to different people. Below is an example of two different ads displayed on Facebook regarding the support of the second amendment:



(Rathi).

The ad on the left targets individuals perceived with high neuroticism and conscientiousness traits as it depicts someone breaking in and portrays the second amendment as an insurance policy, since they tend to worry more. On the right, people with predicted low openness and high agreeableness traits are targeted. This advertisement displays the importance of family and traditions, and people with these traits tend to put others' needs before theirs (Rathi). There is a lot of controversy over whether or not these individualized ads are persuasion or manipulation, and this concept falls into a large "ethical grey area" that I will go more in depth on in a further section.

Impact on 2016 US Presidential Election

While Cambridge Analytica claims to have their success shown through the election of Donald Trump, it is difficult to be certain that their efforts were as effective as they claim. Their initial goal was to have Ted Cruz win the Republican primaries to represent the Republican party, and ultimately be elected as the President of the United States. However, despite his successful improvements in the primaries, including winning a few states' bids, he came in second, and lost to Donald Trump (Davies).

It is difficult to recount the credibility of people's statements of whether or not the data collected and techniques used ultimately helped Trump win the election. Often times "most sides are incentivized to either distance themselves or take credit" for the work that was done (Smith). Additionally, the data was supposedly deleted before Cambridge Analytica worked on his campaign (INSTAR). Using a publicly available dataset, David Sumpter analyzed the accuracy of Cambridge Analytica's regression models. He found that it "worked very well for hardcore Democrats and Republicans, but does not reveal anything about the 76% of users who did not put their political allegiance on Facebook (Sumpter 52-53). Additionally, he found that "the regression model only works when a person has made more than 50 'likes' and, to make reliable predictions, a few hundred 'likes' are required" (Sumpter 53). Alexander Nix and Aleksander Kogan's testimonies confirm Sumpter's conclusion about the difficulty in predicting people's personalities and political ideologies based on Facebook likes (Rathi). While data science itself cannot determine the outcome of an election or change the candidates running, "when elections are decided by razor-thin margins, there's no doubt that technology can play a role" (Smith). It is safe to say that the effectiveness of their models and targeted advertising is still highly debated.

Facebook's Role

Some of the biggest platforms of technology today are social media. Today's digital footprint is higher than ever before, and it is changing the way marketers advertise. In terms of this scandal, I have already discussed how microtargeting was used to target individual Facebook users and how the terms and conditions are often skipped or glanced over. This section aims to highlight Facebook's role and responsibility regarding data privacy.

Cambridge Analytica is not the first time Facebook has been in the news for a data privacy breach. In 2014, Cornell partnered with Facebook "In an experiment with people who use Facebook, we test whether emotional contagion occurs outside of in-person interaction between individuals by reducing the amount of emotional content in the News Feed" (Kramer, Guillory, Hancock 1). Since their research has been published, there have been statements and controversy over their manipulation of "the emotions of three quarters of a million users" (Leetaru). This study was also approved by Cornell's IRB. This is not the only occurrence of this "ethical firestorm" in research with Facebook as Kalev Leetaru is clear to mention. He claims that "Facebook itself exploits its private user data for its own purposes and those of the researchers that collaborate with it" (Leetaru).

It is evident that Cambridge Analytica is not the only company at fault for the scandal. The Federal Trade Commission wanted to be sure that users could be confident in their rights with the platform influencing communication worldwide. Therefore, they issued a \$5 Billion fine and demanded a new privacy compliance system which includes two-factor authentication, and other new tools that helps the FTC monitor Facebook in an effort to make a statement about the importance and seriousness concerning data privacy (FTC). While the penalty is over twenty

times more than any other company has had to pay in data privacy enforcement actions, Facebook's revenue in 2018 alone was \$55.8 Billion (FTC). Therefore, it was only made a small dent on their income statement. Since Facebook is leading the way in social media, I feel as though they should be partially responsible to uphold ethical standards regarding its users data privacy rights.

The Future of Big Data and Propaganda

Data analytics and data science is an exponentially growing field. People who know methods and how to work with vast amounts of data are in high demand. Many companies are striving to reach max efficiency through analytics and prediction models, so it is not surprising that the concept found its way into our democratic political system.

Data analytics were first introduced on the political scene in the 2008 Obama campaign using voter targeting where he aimed specific advertisements based on which demographics tended to be watching television at that time (Leetaru). At this time, the public and press cheered that it was "a long overdue modernization of the campaigning process" (Leetaru). I feel as though the boundaries of the ethics behind data privacy and analytics were going to be pushed at some point and this scandal was inevitable. However, I also wonder if the candidate, or election itself, was not as controversial as it was, if this scandal would have gained the mass following that it did. I think that as for political propaganda and advertisements, it is still going to be prevalent and present -- even if it's not Cambridge Analytica and the Republican party doing the individualized microtargeting. Some, such as Brittany Kaiser, say that there should be a government regulation that bans political advertising on Facebook (Wakefield). However, I am

wary as to agree that this would be the solution to data privacy issues and “manipulation” or “persuasion” propaganda tactics.

The media tends to make a lot of hyperbolic claims to gain the attention of their audiences. Often times, there’s not any scientific backing behind these provided claims. “Simple and sensationalized stories and headlines probably get better viewership, due to the oversimplified, clickbait nature of the articles” (Rathi). Thus, it is important to consider all headlines and testimonies with a bit of hesitation and not immediately accept them with complete certainty. A potential example of this comes from the whistleblower claims of Christopher Wylie and Brittany Kaiser. While I am not directly questioning the validity of their statements, neither of them, Wylie in particular, left the company on great terms. Therefore, in an attempt to question the ethics of this scandal, it is important to consider the incentive of personal gain by creating negative publicity about the company in regards to exaggerated claims made depicting the impact of the company’s efforts (Rathi). The Cambridge Analytica-Facebook scandal has brought to life the issue of data privacy and even if you *can* collect the data, should you?

Conclusion: Were the Methods Used Ethical?

There are three approaches to dissect whether the methods used throughout this case were ethical: from Cambridge Analytica’s perspective, Facebook’s perspective, and a consumer’s perspective.

Cambridge Analytica has gone bankrupt since the allegations filed by the FTC. They are blamed for deceiving consumers in how their data was collected and about identifiable information (FTC). While the data was showing the user a personality score, the firm was

harvesting each Facebook User ID to gain insight for voter profiling. The claim made at the beginning of the quiz when they first signed into their Facebook account was:

In this part, we would like to download some of your Facebook data using our Facebook app. We want you to know that we will NOT download your name or any other identifiable information -- we are interested in your demographics and likes (FTC).

This claim was adherently false, since the Facebook User ID was collected. Therefore, the methods Cambridge Analytica used in obtaining their data can be said to be unethical. However, I do not think that the scandal is entirely their fault.

As I mentioned in the “Facebook’s Role” section, I do think that Facebook is responsible for making sure its users privacy is upheld. They were charged by the FTC for “deceiving users about their ability to control the privacy of their personal information” (FTC). There are 2.3 billion monthly active users on Facebook and it is their “critical responsibility of clearly communicating privacy options to users” (Rathi). While there were misuses and misunderstandings of policies surrounding what was able to be harvested (such as Friend’s lists and informations), Facebook is still the platform that allowed it to even be possible. It is eerie to me to think that my data could have been gathered based on a personality quiz that one of my friends took without my knowledge. As to whether Cambridge Analytica or Facebook is to blame for this, I believe that it is more at the fault of Facebook. After all, they are the platform that makes this all possible (Leetaru).

The consumer is a difficult stance to tackle. Everyone has different opinions and habits on social media usage. However, we have created a culture where we want to share our lives

with the world. Our Facebook timeline has become a highlight reel and montage of our lives, a photo album for the world to see. Should we be blamed for putting our information online? From a broad perspective, we technically should be. Just like Cambridge Analytica wouldn't have had a data set without Facebook, Facebook wouldn't even exist if we didn't buy into the idea and post about each minute of every day. It is difficult, especially as a consumer myself, to directly correlate the blame of this scandal to an innocent post about my dog looking cute one day or liking a page that shows funny animal videos, but that is how they created the personality profiles that they did. People don't want to admit that the propaganda works because of confronting our own susceptibility, lack of privacy, and hopeless dependency on these technology platforms (Amer, Noujaim "The Great Hack"). In the documentary *The Great Hack*, David Carroll makes the statement: "As a user, do we have the right to opt out?" in an argument surrounding full disclosure (Amer, Noujaim "The Great Hack"). Personally, I agree that there should be a way to opt out of our data being collected in order to secure our privacy from our own end. Therefore, I do not think the consumer can be at fault for the scandal, since we did not have a lot of control over how the data was collected or used.

Data has surpassed oil as the most valuable asset in the world (Amer, Noujaim "The Great Hack"). It is important that as consumers we understand the risks of sharing our lives with the world and how there is constantly being data collected about us -- through every click on the internet, navigation through our phone, or like on social media. The digital world is a scary place and we must be aware of its consequences. However, in regards to the scandal ultimately Facebook should take the brunt of the fault. They have created the system and allowed the third party systems to conduct grossly unethical, manipulative experiments. However, Cambridge

Analytica is depicted as the villain in many ways. Even if they could access and create the database that they did, should they have? As depicted in *The Great Hack* in reference to getting caught in the Olympics doping, “it doesn’t matter the amount of the drug, you were still cheating” and this is said to be the case with the Cambridge Analytica scandal and the 2016 election (Amer, Noujaim “The Great Hack”).

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